The chapter analyses the relationship between the internationalization processes undertaken by manufacturing firms located in industrial districts (IDs) and their home-based local assets. It investigates how multinational enterprises (MNEs) could foster the sustainability of assets traditionally present in IDs by being embedded in GVCs. Through a multiple case study of Italian MNEs located in district areas, the research provides empirical evidence for why local companies that have developed in the global market still locate their main activities in district areas, and how MNEs might trigger positive externalities and nourish local assets by jointly engaging in global and local connections. This work concludes by highlighting policy issues.

Keywords: Global Value Chains, Industrial District, Industrial Commons

6

Global value chains and the role of MNEs in local production systems

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Introduction

In the last decades, economic activity has become international not only in terms of the exchange of goods and services, but also in its organization ([Gereffi et al., 2001](15032-0551-FullBook.docx" \l "Ref_423_FILE150320551PII006" \o "(ManLink):Gereffi, G., Humphrey, J., Kaplinsky R., and Sturgeon, T. J. (2001). Introduction: Globalisation, value chains and development. IDS Bulletin, 32:1–8. UserName - DateTime: WFS-4/27/2017 12:43:20 PM)). We have been witness to a reorganization of economic activities that has led to the fragmentation of production processes on a global scale and, accordingly, to the formation of GVCs.

The international fragmentation of production has emerged through the offshoring processes undertaken by MNEs. These processes consist of the transfer of activities of the value chain to regions with lower operating costs or specialized skills, and sometimes even to the widening of markets ([Gereffi and Sturgeon, 2004](15032-0551-FullBook.docx" \l "Ref_425_FILE150320551PII006" \o "(ManLink):Gereffi G., and Sturgeon T. J. (2004). Globalization, Employment, and Economic Development: A Briefing Paper. Sloan Workshop Series in Industry Studies. Rockport, Massachusetts. UserName - DateTime: WFS-4/27/2017 12:43:43 PM)). Many companies have moved lower value-added activities to low-labour cost countries, maintaining in the domestic market the upstream and downstream activities considered less replaceable and able to capture larger shares of economic value (see the literature on the smile curve, [Everatt et al., 1999](15032-0551-FullBook.docx" \l "Ref_419_FILE150320551PII006" \o "(AutoLink):Everatt, D., Tsai, T., and Cheng, B. (1999). The Acer Group’s China manufacturing decision. Version A. Ivey Case Series #9A99M009, Richard Ivey School of Business, University of Western Ontario. UserName - DateTime: WFS-4/26/2017 5:36:14 PM); [Mudambi, 2008](15032-0551-FullBook.docx" \l "Ref_439_FILE150320551PII006" \o "(AutoLink):Mudambi, R. (2008). Location, control and innovation in knowledge-intensive industries. Journal of economic Geography. 8(5), 699–725. UserName - DateTime: WFS-4/26/2017 5:36:30 PM); for a critical perspective, see: [Buciuni et al., 2014](15032-0551-FullBook.docx" \l "Ref_397_FILE150320551PII006" \o "(ManLink):Buciuni, G., Corò, G., and Micelli, S. (2014). Rethinking the role of manufacturing in global value chains. An international comparative study in the furniture industry. Industrial and Corporate Change, 23(4), 967–996. UserName - DateTime: WFS-4/27/2017 12:44:22 PM)). The extensive pursuit of this strategy of commoditizing manufacturing by companies in industrialized countries has produced effects on the resource endowment of the areas involved in GVCs, both in advanced and in emerging economies. Specifically, this labour division has led companies more open to international networks to drift progressively apart from their domestic productive ecosystem. This move away from the domestic environment has generated, in the territories in question, a gradual dissipation of their “industrial commons” ([Pisano and Shih, 2012](15032-0551-FullBook.docx" \l "Ref_445_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2012). Producing Prosperity. Why America Needs a Manufacturing Renaissance. Boston: Harvard Business School Press. UserName - DateTime: WFS-4/27/2017 12:44:30 PM)); that is, the set of external economies of localization that companies in IDs widely employ, albeit often unconsciously – such as “R&D and manufacturing infrastructure, know-how process-development skills, and engineering capabilities embedded in firms, universities, and other organizations that provide the foundation for growth and innovation in a wide range of industries” ([Pisano and Shih, 2012](15032-0551-FullBook.docx" \l "Ref_445_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2012). Producing Prosperity. Why America Needs a Manufacturing Renaissance. Boston: Harvard Business School Press. UserName - DateTime: WFS-4/27/2017 12:44:43 PM), p. 2). Indeed, relocation of operations to companies in emerging economies has led – in the domestic base – to the hollowing out of specialized supplier networks, competitors and qualified workforces, as well as experienced managers. The fading of this system of resources has accompanied the contraction of the knowledge spillovers ([e.g. Capello and Lenzi, 2015](15032-0551-FullBook.docx" \l "Ref_399_FILE150320551PII006" \o "(ManLink):Capello, R., and Lenzi, C. (2015). The knowledge – innovation nexus. Its spatially differentiated returns to innovation. Growth and Change, 46(3), 379–399. UserName - DateTime: WFS-4/27/2017 12:45:03 PM)) needed to keep the local manufacturing fabric engaged with production activities. The geographic separation from production activities seems to lead advanced economies to a severe reduction in the circulation of know-how necessary to create new products, to improve and innovate the existing ones, and to be competitive in the long run ([Berger, 2013](15032-0551-FullBook.docx" \l "Ref_393_FILE150320551PII006" \o "(AutoLink):Berger, S. (2013). Making In America. From Innovation To Market. Cambridge, Massachusetts. The MIT Press. UserName - DateTime: WFS-4/26/2017 5:36:05 PM); [Ketokivi and Ali-Yrkkö, 2009](15032-0551-FullBook.docx" \l "Ref_428_FILE150320551PII006" \o "(ManLink):Ketokivi, M., and Ali-Yrkkö, J. (2009). Unbundling R&D and manufacturing: Postindustrial myth or economic reality?. Review of Policy Research, 26(1‐2), 35–54. UserName - DateTime: WFS-4/27/2017 12:45:16 PM)).

The advantages arising from being part of a GVC, as well as the role of external economies for the competitiveness of firms and the overall ID, have been noticed in the literature (e.g. [De Marchi et al., 2014](15032-0551-FullBook.docx" \l "Ref_407_FILE150320551PII006" \o "(ManLink):De Marchi, V., Lee, J., and Gereffi, G. (2014). Globalization, recession and the internationalization of industrial districts: experiences from the Italian gold jewellery industry. European Planning Studies, 22(4), 866–884. UserName - DateTime: WFS-4/27/2017 12:45:46 PM)). However, the interplay between the local and global contexts is rather overlooked. Previous studies have started to shed light on role of leading firms in fostering external knowledge diffusion at district level ([Morrison, 2008](15032-0551-FullBook.docx" \l "Ref_438_FILE150320551PII006" \o "(AutoLink):Morrison, A. (2008). Gatekeepers of knowledge within industrial districts: who they are, how they interact. Regional Studies, 42(6), 817–835. UserName - DateTime: WFS-4/26/2017 5:36:30 PM)) and, more recently, on how the combination of local and non-local skills shapes new “cluster dependent” knowledge ([Hervas-Oliver and Boix-Domenech, 2013](15032-0551-FullBook.docx" \l "Ref_433_FILE150320551PII006" \o "(ManLink):Hervas-Oliver, J. L., and Boix-Domenech, R. (2013). The economic geography of the meso-global spaces: Integrating multinationals and clusters at the local – global level. European Planning Studies, 21(7), 1064–1080. UserName - DateTime: WFS-4/27/2017 12:46:10 PM), p. 1077). Notwithstanding, there is still scant evidence for the link between companies’ international presence and the reproduction of local factors embedded in the IDs sustaining manufacturing, such as home-country employment and productivity growth (for an exception, see [Castellani and Pieri, 2015](15032-0551-FullBook.docx" \l "Ref_400_FILE150320551PII006" \o "(ManLink):Castellani, D., and Pieri, F. (2015). Outward investments and productivity: Evidence from European regions. Regional Studies, 50(12), 1945–1964. UserName - DateTime: WFS-4/27/2017 12:46:39 PM); [Elia et al., 2009](15032-0551-FullBook.docx" \l "Ref_412_FILE150320551PII006" \o "(ManLink):Elia, S., Mariotti, I., and Piscitello, L. (2009). The impact of outward fdi on the home country’s labour demand and skill composition. International Business Review, 18(4), 357–372. UserName - DateTime: WFS-4/27/2017 12:46:50 PM)). Exploring this relationship would provide policy-makers with a deeper understanding of which externalities can positively affect the sustainability of the resources present in district areas as part of a globalized environment.

In light of this limitation of the existing literature, the following research questions emerge as interesting, and relevant, yet under-studied, issues: *Why do local companies which have grown into the global market still locate their main activities in district areas? Under what circumstances does the presence of MNEs engaging both in global and local connections play a supportive role for the development of district areas?*

This work aims to contribute to filling these gaps by providing empirical evidence to identify possible actions that an MNE can undertake to sustain the distinctive assets of an ID, those originally developed within a community of people and a population of firms in one naturally and historically bounded area ([Becattini, 1990](15032-0551-FullBook.docx" \l "Ref_391_FILE150320551PII006" \o "(AutoLink):Becattini G. (1990). The Marshallian industrial district. In: Pyke F., Becattini G. and Sengenberger W. (eds.), Industrial districts and inter-firm cooperation in Italy. Geneve: International Institute for Labour, pp 37–51. UserName - DateTime: WFS-4/26/2017 5:36:04 PM), p. 38). To address these issues, we focus on MNEs (three lead firms and seven specialized suppliers) as the emergence of large players in district systems has led to changes in the dynamics and relationships within the districts. Indeed, the use of local resources by MNEs has potentially a marked effect on the development of the industrial commons of the production systems in which they are embedded. Actions undertaken by MNEs can either strongly foster or equally strongly inhibit the reproduction of those assets that have enabled IDs to grow and become established over the years.

Industrial district and industrial commons: definitions and characteristics

Even though the division of labour in different production phases has traditionally enabled the thriving of small and medium companies, the evolutionary processes of the IDs show production systems characterized by the co-presence and the complementarities ([Intesa Sanpaolo, 2015](15032-0551-FullBook.docx" \l "Ref_435_FILE150320551PII006" \o "(AutoLink):Intesa Sanpaolo (2015). Economia e finanza dei distretti industriali. Annual Report – N. 8, Direzione Studi e Ricerche, December. UserName - DateTime: WFS-4/26/2017 5:36:28 PM)) of large, medium and small firms. Research has reported rising evidence of heterogeneity in terms of the size of companies populating an ID. As described in Chapter 1, De Marchi et al. report how the presence of MNEs in the cluster has triggered new dynamics in the ID. To different extents, leading firms have moved both their business activities as well as their supply-chain relationships abroad by signing supply agreements and joint ventures in production, or alternatively by setting proprietary investment in production plants or subsidiaries ([De Marchi and Grandinetti, 2014](15032-0551-FullBook.docx" \l "Ref_406_FILE150320551PII006" \o "(ManLink):De Marchi, V., and Grandinetti, R. (2014). Industrial districts and the collapse of the Marshallian model: looking at the Italian experience. Competition and Change, 18(1), 70–87. UserName - DateTime: WFS-4/27/2017 12:47:20 PM)). The presence of MNEs plays a crucial role in the knowledge diffusion within, as well as outside, the ID boundaries. In this respect, [Morrison (2008](15032-0551-FullBook.docx" \l "Ref_438_FILE150320551PII006" \o "(AutoLink):Morrison, A. (2008). Gatekeepers of knowledge within industrial districts: who they are, how they interact. Regional Studies, 42(6), 817–835. UserName - DateTime: WFS-4/26/2017 5:36:30 PM), p. 818) finds that MNEs as leading firms make significant efforts to search for and translate knowledge coming from external sources, including universities and sectoral research centres.

Over the last years, the IDs have undergone a deep transformation. The dynamics brought about by an increasing heterogeneity of the ID fabric, along with globalization and technological changes, have had a considerable impact on the structure of the IDs. District firms – mainly medium and large ones – have increasingly established connections with actors located outside the district area, generating external economies that go beyond the cluster boundaries. The changes activated by firms based in districts in the geographical configuration of networks have led to the fading of the strong one-industry specialization originally peculiar to district areas. Nevertheless, a manufacturing supply infrastructure and know-how embedded in firms, the education system and public institutions can still be found in these territories to a certain extent. In light of the above-mentioned evolutionary processes, the concept of industrial commons seems to be more suitable to describe the resources currently present in district areas. Indeed, the definition of industrial commons coined by [Pisano and Shih (2009](15032-0551-FullBook.docx" \l "Ref_446_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2009). Restoring American competitiveness. Harvard Business Review, 87(7–8), 114–125. UserName - DateTime: WFS-4/27/2017 12:47:59 PM)) extends beyond the district dimension to the web of relationships among R&D and manufacturing infrastructures distinctive to an ID. [Pisano and Shih (2009](15032-0551-FullBook.docx" \l "Ref_446_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2009). Restoring American competitiveness. Harvard Business Review, 87(7–8), 114–125. UserName - DateTime: WFS-4/27/2017 12:48:10 PM)) define industrial commons as “the set of manufacturing and technical capabilities that support innovation across a broad range of industries” ([2009](15032-0551-Ref Mismatch Report.docx" \l "LStERROR_204" \o "Goto error report), p. xii). It consists of “technological know-how, operational capabilities, and specialized skills that are embedded in the workforce, competitors, suppliers, customers, cooperatives R&D ventures, and universities and often support multiple industrial sectors[” (2009](15032-0551-Ref Mismatch Report.docx" \l "LStERROR_207" \o "Goto error report), p. 13).

The ID concept constitutes the founding pillar to acknowledge the notion of industrial commons. It springs from the distinctive “industrial atmosphere” of IDs but goes beyond the circumscribed district areas to interpret the evolution of a geographically concentrated population of manufacturing and service companies, as well as the formation of inter-cluster innovation phenomena. The commons are constantly nourished by the knowledge flowing across companies through movements of employees, supplier-customer collaborations or formal and informal technology sharing. Knowledge spillover may occur amongst geographically proximate companies operating in different sectors but which are industrially complementary. As [Pisano and Shih (2009](15032-0551-FullBook.docx" \l "Ref_446_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2009). Restoring American competitiveness. Harvard Business Review, 87(7–8), 114–125. UserName - DateTime: WFS-4/27/2017 12:50:20 PM)) claim, these capabilities evolve over time and are likely to trigger the development of new products both in the same industry and in new ones. Indeed, innovation in one industry is linked to development of other sectors; similarly, the decline of an industry commons is likely to damage other industries. Thus, bridging strong complementarities in capabilities with localized knowledge can pave the way to the flourishing of a specific industry, while inhibiting the development of others. As [Pisano and Shih (2012](15032-0551-FullBook.docx" \l "Ref_445_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2012). Producing Prosperity. Why America Needs a Manufacturing Renaissance. Boston: Harvard Business School Press. UserName - DateTime: WFS-4/27/2017 12:50:27 PM)) state, technical and operational capabilities to produce complex goods are strongly connected with a country’s capacity to generate and capture value from innovation.

The international fragmentation of production, which gave rise to the creation of GVCs, has linked the industrial commons located in multiple countries as part of a same production ecosystem. The relocation of manufacturing activities to low-labour-cost economies has undermined the sustainability of the industrial commons located in advanced countries due to the hollowing out of specialized supplier networks, competitors and qualified workforces, as well as experienced managers. Conversely, it has enabled the formation of commons in emerging countries by the creation of supplier infrastructures and, accordingly, local production systems.

The industrial commons can be classified as goods whose use is difficult to exclude from potential beneficiaries. These goods are characterized by a certain degree of rivalry as well, especially when the allocation of these resources falls below a critical threshold. Given the nature of the positive externality of the industrial commons, two important aspects can be identified: first, the existence of a social benefit coming from the fact that the company can draw from the assets of the local commons without having to pay a price; second, the absence of property rights, which can easily give rise to a market equilibrium lower than the social optimum. Depending on the type of local resources, the imbalance arising from their under/over-exploitation can lead to the rapid disappearance of goods. The fact that people do not pay for the consumption of a common good leads them to use the resource at a higher rate than that at which it can be produced (over-exploitation imbalance of a tangible asset), eventually leading to its depletion. [Hardin (1968](15032-0551-FullBook.docx" \l "Ref_430_FILE150320551PII006" \o "(AutoLink):Hardin G. (1968). The tragedy of the commons. Science, 162(3859), 1243–1248. UserName - DateTime: WFS-4/26/2017 5:36:26 PM)) defines this phenomenon as a “tragedy of the commons”. It might also be the case that common good under-use weakens the regeneration of the resource, determining its gradual disappearance. This is most likely to happen if the common good is an intangible resource, such as the industrial commons. Nevertheless, as shown in the masterful work of Elinor [Ostrom (1990](15032-0551-FullBook.docx" \l "Ref_442_FILE150320551PII006" \o "(AutoLink):Ostrom, E. (1990). Governing the commons: The evolution of institutions for collective action. Cambridge: Cambridge University Press. UserName - DateTime: WFS-4/26/2017 5:36:31 PM), [2010](15032-0551-FullBook.docx#Ref_443_FILE150320551PII006)) we do not lack evidence nor models of successful governance of the use of the commons, which have significant similarities with system of local resources to which we refer.

This chapter explores what the industrial common assets are and why they keep local companies, which have developed in the global market from locating their main activities outside the district areas. Then, it attempts to identify how MNEs can boost the regeneration of the industrial commons present in the district area in which the companies were founded, commons that has nourished their growth over the years. It investigates under what circumstances MNEs are able to sustain the local assets of their domestic bases through the simultaneous engagement with local industrial commons, along with global ones as part of the same production ecosystem. The exchange of resources between companies and the territory has a two-way structure: on the one hand, the locational context influences a firm’s ability to compete in international markets; on the other, the features of this context are largely the outcome of enterprises’ competitive strategies. Several local assets from which firms benefit constitute a common good produced by the interaction of a number of local actors, both public and private ([Camagni, 2008](15032-0551-FullBook.docx" \l "Ref_398_FILE150320551PII006" \o "(AutoLink):Camagni, R. (2008). Regional competitiveness: Towards a Concept of Territorial Capital. In: Camagni, R., Capello, R., Chizzolini, B., Fratesi, U. (eds). Modelling Regional Scenarios for the Enlarged Europe. Springer Berlin Heidelberg, pp. 33–47. UserName - DateTime: WFS-4/26/2017 5:36:07 PM)). Consequently, entrepreneurial activities are essential in influencing the dynamics of agglomeration. It is the use of local assets by companies that can either reinforce or, on the contrary, weaken the formation of the industrial commons.

In our study, we focus on the analysis of the immaterial assets, which emerge as the most critical in the literature on ID and industrial commons. We identify five local assets that are crucial for sustaining the development of an area and, accordingly, the innovation capabilities of the companies populating that territory: 1) labour pools and distinctive skills; 2) supplier and user networks; 3) education and research systems (including universities, higher education, lifelong education, public and private research centres); 4) public, private and associative institutions; and 5) the financial system and its ability to provide capital and information to companies.

Effects of companies’ internationalization processes on the home-base industrial commons

Technological changes (mainly in digital innovation and integrated logistic developments) have enabled global openness in trading goods, services, information and production, giving manufacturing firms the “perception” of being “footloose” companies ([Baldwin and Evenett, 2015](15032-0551-FullBook.docx" \l "Ref_389_FILE150320551PII006" \o "(ManLink):Baldwin, R. E., and Evenett, S. J. (2015). Value creation and trade in 21st century manufacturing. Journal of Regional Science, 55(1), 31–50. UserName - DateTime: WFS-4/27/2017 12:50:55 PM)). Supra-local organized relations (e.g. global networks of firms) might take place even in the absence of geographical proximity, as actors can collaborate by sharing rules and standards, as well as benefit from the development of the long-distance mobility of individuals and information ([Torre and Rallet, 2005](15032-0551-FullBook.docx" \l "Ref_453_FILE150320551PII006" \o "(ManLink):Torre, A., and Rallet, A. (2005). Proximity and localization, Regional studies, 39(1), 47–59. UserName - DateTime: WFS-4/27/2017 12:51:11 PM)). The implementation of new technologies has strongly impacted on the formation of production relationships. It eases and strengthens the development of links outside the home-base industrial area, giving rise to the formation of GVCs.

Although the globalized economy might be seen as being characterized by an “increasing nomadism of firms” ([Zimmerman, 1995](15032-0551-FullBook.docx" \l "Ref_455_FILE150320551PII006" \o "(ManLink):Zimmermann, J. B. (1995). L’ancrage territorial des activités industrielles et technologiques: Une approche méthodologique. Commissariat Général du Plan, Paris. UserName - DateTime: WFS-4/27/2017 12:51:15 PM)), GVCs are not borderless and a-territorial networks. They are, instead, networks whose nodes are places where socio-economic-institutional activities are embedded ([De Propris, 2010](15032-0551-FullBook.docx" \l "Ref_408_FILE150320551PII006" \o "(ManLink):De Propris, L. (2010). Re-territorialising production: Global Value Chains. Paper presented at the Annual Meeting of the SASE Annual Conference, Philadelphia, PA, USA. UserName - DateTime: WFS-4/27/2017 12:51:22 PM)). Each area is endowed with a specific commons, which is distinct from that of other socio-economic environments. The commons endowed in an area heavily affects the location decision of firms. In an increasingly global and competitive world, local territories become a key variable for the competitiveness of enterprises ([OECD, 2001](15032-0551-FullBook.docx" \l "Ref_441_FILE150320551PII006" \o "(ManLink):OCED (2001). Territorial Outlook 2001, 15. UserName - DateTime: WFS-4/27/2017 12:51:33 PM)).

GVCs connect areas located in different countries that have territorial specialization – such as the ones occupied by IDs – in stages of the same production process. By reshaping the organization of economic activities through the creation of GVCs, globalization has led to a redefinition of the international networks of places, each of which is marked out by a specific economic task that still allows firms to exploit the competitive advantage of location (Baldwin and Evenett, 2015). The upgrading activities in emerging economies are undermining the competitive advantage of industrialized countries. Indeed, in high-income countries, the hollowing out of manufacturing activities has negatively impacted on their home-region productivity growth ([Castellani and Pieri, 2015](15032-0551-FullBook.docx" \l "Ref_400_FILE150320551PII006" \o "(ManLink):Castellani, D., and Pieri, F. (2015). Outward investments and productivity: Evidence from European regions. Regional Studies, 50(12), 1945–1964. UserName - DateTime: WFS-4/27/2017 12:52:10 PM)) and new job creation ([Bailey et al., 2010](15032-0551-FullBook.docx" \l "Ref_387_FILE150320551PII006" \o "(AutoLink):Bailey, D., Bellandi, M., Caloffi, A., and De Propris, L. (2010). Place-renewing leadership: Trajectories of change for mature manufacturing regions in Europe. Policy Studies, 31(4), 457–474. UserName - DateTime: WFS-4/26/2017 5:35:56 PM)). Globalization has strongly affected the firm population of IDs. It has weakened their socio-economic fabric and, accordingly, had a marked effect on their production structure, shrinking, amongst other things, the reproducibility of the entrepreneurial factor ([De Marchi and Grandinetti, 2014](15032-0551-FullBook.docx" \l "Ref_406_FILE150320551PII006" \o "(ManLink):De Marchi, V., and Grandinetti, R. (2014). Industrial districts and the collapse of the Marshallian model: looking at the Italian experience. Competition and Change, 18(1), 70–87. UserName - DateTime: WFS-4/27/2017 12:52:33 PM)). The drop in the critical mass of specific ties in the domestic socio-economic environment has contributed to the poorer performance of firms and their surrounding environment, a phenomenon known in the literature as the erosion of the industrial commons ([Pisano and Shih, 2009](15032-0551-FullBook.docx" \l "Ref_446_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2009). Restoring American competitiveness. Harvard Business Review, 87(7–8), 114–125. UserName - DateTime: WFS-4/27/2017 12:52:45 PM)). Firms in industrialized countries relocate their operations to emerging economies with the aim of intensifying resources on the development of activities with high-value added. Contrary to expectations, the implementation of this strategy has led to an increasing volume of offshoring of functions requiring the involvement of highly-skilled workers ([Blinder and Krueger, 2013](15032-0551-FullBook.docx" \l "Ref_394_FILE150320551PII006" \o "(ManLink):Blinder, A. S., and Krueger, A. B. (2013). Alternative measures of offshorability: A survey approach. Journal of labour Economics, Part 2, 31(2), 97–127. UserName - DateTime: WFS-4/27/2017 12:53:08 PM)). As shown by [Pisano and Shih (2009](15032-0551-FullBook.docx" \l "Ref_446_FILE150320551PII006" \o "(ManLink):Pisano, G. P., and Shih, W. C. (2009). Restoring American competitiveness. Harvard Business Review, 87(7–8), 114–125. UserName - DateTime: WFS-4/27/2017 12:53:50 PM)) in their study on the offshoring of US industry, the economy runs the risk of weakening the foundation of skills and knowledge which support the most innovative activities (e.g. research), if the production system falls below a critical threshold of productive activity. Examining the effects of the transfer of production by multinational companies to foreign subsidiaries located both in low-labour-cost countries and in industrialized ones, [Elia et al. (2009](15032-0551-FullBook.docx" \l "Ref_412_FILE150320551PII006" \o "(ManLink):Elia, S., Mariotti, I., and Piscitello, L. (2009). The impact of outward fdi on the home country’s labour demand and skill composition. International Business Review, 18(4), 357–372. UserName - DateTime: WFS-4/27/2017 12:53:57 PM)) report three major production substitution effects on employment in foreign affiliates’ domestic transfer: 1) a reduction in the domestic low-skilled workforce; 2) a loss of market share from local suppliers and the loss of the opportunity to learn and grow through the relationship with the leader firm; and 3) the sign-out of subcontracting agreements.

The depletion of the economic fabric in advanced economies has triggered significant reductions in knowledge circulation and, as a consequence, a shrinkage of knowledge spillovers. As widely shown by previous studies, knowledge externalities, informal knowledge and capabilities are crucial for the survival of innovative ecosystems (e.g. [Anselin et al., 1997;](15032-0551-FullBook.docx" \l "Ref_385_FILE150320551PII006" \o "(ManLink):Anselin L., Varga A., and Acs Z. (1997). Local geographic spillovers between university research and high technology innovations. Journal of Urban Economics, 42(3), 422–448. UserName - DateTime: WFS-4/27/2017 12:55:10 PM) [Audretsch and Feldman, 1996](15032-0551-FullBook.docx" \l "Ref_386_FILE150320551PII006" \o "(ManLink):Audretsch, D. B., and Feldman, M. P. (1996) R&D spillovers and the geography of innovation and production. The American Economic Review, 630–640. UserName - DateTime: WFS-4/27/2017 12:55:25 PM); [Ellison et al., 2007](15032-0551-FullBook.docx" \l "Ref_413_FILE150320551PII006" \o "(ManLink):Ellison, G., Glaeser, E. L., and Kerr, W. (2007). What Causes Industry Agglomeration? Evidence from Coagglomeration Patterns. NBER Working Paper No. 13068. National Bureau of Economic Research. Available at: www.nber.org/papers/w13068. UserName - DateTime: WFS-4/27/2017 12:55:39 PM)). Labour mobility and social networks ([Agrawal et al., 2008](15032-0551-FullBook.docx" \l "Ref_382_FILE150320551PII006" \o "(AutoLink):Agrawal, A., Kapur, D., and McHale, J. (2008). How do spatial and social proximity influence knowledge flows? Evidence from patent data. Journal of Urban Economics, 64(2), 258–269. UserName - DateTime: WFS-4/26/2017 5:35:55 PM); [Breschi and Lissoni, 2009](15032-0551-FullBook.docx" \l "Ref_396_FILE150320551PII006" \o "(ManLink):Breschi, S., and Lissoni, F. (2009). Mobility of skilled workers and co-invention networks: An anatomy of localized knowledge flows. Journal of Economic Geography. UserName - DateTime: WFS-4/27/2017 12:55:47 PM)) have been identified as different mechanisms channelling knowledge flows, especially in the context of limited R&D intensity ([Capello and Lenzi, 2015](15032-0551-FullBook.docx" \l "Ref_399_FILE150320551PII006" \o "(ManLink):Capello, R., and Lenzi, C. (2015). The knowledge – innovation nexus. Its spatially differentiated returns to innovation. Growth and Change, 46(3), 379–399. UserName - DateTime: WFS-4/27/2017 12:56:05 PM)). The importance of informal knowledge flows amongst physically close, industrially complementary actors is even more critical in traditional sectors, such as low-tech manufacturing, where actors “rely more on technologies embodied in machinery and equipment” and “informal knowledge embedded in professionals” (Conte and Vivarelli, [2005](15032-0551-FullBook.docx#Ref_403_FILE150320551PII006) and [Piergiovanni et al., 1997](15032-0551-FullBook.docx" \l "Ref_444_FILE150320551PII006" \o "(ManLink):Piergiovanni, R., Santarelli, E., and Vivarelli, M. (1997). From which source do small firm derive their innovative inputs? Some evidence from Italian provinces. Review of Industrial Organization,12, 243–258. UserName - DateTime: WFS-4/27/2017 12:56:30 PM) as cited by [Capello and Lenzi, 2015](15032-0551-FullBook.docx" \l "Ref_399_FILE150320551PII006" \o "(ManLink):Capello, R., and Lenzi, C. (2015). The knowledge – innovation nexus. Its spatially differentiated returns to innovation. Growth and Change, 46(3), 379–399. UserName - DateTime: WFS-4/27/2017 12:56:48 PM), p. 3).

The importance of engaging with global and local connections

The competitiveness of a company and the health of the communities around it are closely intertwined. As Porter and Kramer highlighted:

A business needs a successful community, not only to create demand for its products but also to provide critical public assets and a supportive environment. A community needs successful businesses to provide jobs and wealth creation opportunities for its citizens.

([Porter and Kramer, 2011](15032-0551-FullBook.docx" \l "Ref_447_FILE150320551PII006" \o "(ManLink):Porter, M. E., and Kramer, M. R. (2011). Creating shared value, Harvard Business Review, 89(1/2), 62–77. UserName - DateTime: WFS-4/27/2017 12:57:00 PM), p. 6)

As this synergy occurs, territories need to connect local resources with non-local ones. Drawing on international business and economic geography literature, local companies could boost innovation and competitiveness by combining local and non-local knowledge which generate unique repositories of knowledge or “knowledge domains” ([Cooke, 2006](15032-0551-FullBook.docx" \l "Ref_404_FILE150320551PII006" \o "(AutoLink):Cooke, P. (2006). Global bioregions: Knowledge domains, capabilities and innovation system networks. Industry and Innovation, 13(4), 437–458. UserName - DateTime: WFS-4/26/2017 5:36:08 PM)). Given their international structure, MNEs emerge as pivotal actors that connect territories, convey information and knowledge amongst domestic and foreign actors, and articulate global pipelines.

As aforementioned, the intense reorganization of economic activity has been driven crucially by MNEs’ offshoring strategies, which have led to the emergence of GVCs. MNEs have considered the creation of GVCs as an indispensable move in seeking to maintain their competitiveness vis-à-vis very price aggressive competitors, which has especially been the case in the manufacturing sector ([Ramirez and Rainbird, 2010](15032-0551-FullBook.docx" \l "Ref_448_FILE150320551PII006" \o "(ManLink):Ramirez, P., and Rainbird, H. (2010). Making the connections: Bringing skill formation into global value chain analysis. Work, Employment and Society, 24(4), 699–710. UserName - DateTime: WFS-4/27/2017 12:57:13 PM)). Indeed, for lead firms in advanced economies, being involved in a GVC is a necessary condition for survival and, to a certain extent, their international presence is beneficial not just for the companies themselves, but also for home-region productivity. As the international business literature has shown, outward foreign direct investments (FDIs) are positively associated with a sales increase for investing firms and their suppliers ([Castellani and Pieri, 2015](15032-0551-FullBook.docx" \l "Ref_400_FILE150320551PII006" \o "(ManLink):Castellani, D., and Pieri, F. (2015). Outward investments and productivity: Evidence from European regions. Regional Studies, 50(12), 1945–1964. UserName - DateTime: WFS-4/27/2017 12:57:23 PM), p. 2). According to [Castellani and Pieri (2010](15032-0551-FullBook.docx" \l "Ref_401_FILE150320551PII006" \o "(ManLink):Castellani, D., and Pieri, F. (2010). Investimenti esteri e produttività: le regioni italiane nel contesto europeo. In: Zazzaro, A. (Eds), Reti Di Imprese E Territorio, Il Mulino. UserName - DateTime: WFS-4/27/2017 12:57:31 PM)), FDIs show positive effects on regional productivity up to a certain extent. If multinationals develop a “too” high volume of cross-border activities, the local supply chain slowly fades, forcing firms to turn to suppliers located outside the domestic base. Such a perspective threatens the sustainability of the growth process of the territory. To slow down this phenomenon, companies need to activate the production relationship with the actors populating their home-country territory. In the ID literature, scholars (e.g. [Chiarvesio et al., 2010](15032-0551-FullBook.docx" \l "Ref_402_FILE150320551PII006" \o "(ManLink):Chiarvesio, M., Di Maria, E. and Micelli, S. (2010). Global value chains and open networks: The case of Italian industrial districts. European Planning Studies, 18(3), 333–350. UserName - DateTime: WFS-4/27/2017 12:57:49 PM)) have shown how some leading firms in ID have started acting as an “open network”. These open network companies have extended their value chain beyond district borders and managed global networks in a completely different way with respect to the traditional model of industrial district firms, which is mainly organized on a local basis. Therefore, it is important to re-think the role of MNEs and how they could sustainably use their local and global networks. IDs can benefit from the involvement in GVCs by, for instance, learning from the strategies applied by global buyers (e.g. [Schmitz and Knorringa, 2000](15032-0551-FullBook.docx" \l "Ref_451_FILE150320551PII006" \o "(ManLink):Schmitz, H. and Knorringa, P. (2000). Learning from global buyers. Journal of Development Studies, 37(2), 177–205. UserName - DateTime: WFS-4/27/2017 12:58:08 PM); [Bair and Gereffi, 2001](15032-0551-FullBook.docx" \l "Ref_388_FILE150320551PII006" \o "(ManLink):Bair, J. and Gereffi, G. (2001). Local clusters in global chains: The causes and consequences of export dynamism in Torreon’s blue jeans industry. World Development, 29(11), 1885–1903. UserName - DateTime: WFS-4/27/2017 12:58:17 PM)). Both MNEs and their domestic bases would benefit from the simultaneous use of global and local connections. In the results and discussion sections we present some of the possible simultaneous uses of global and local connections undertaken by lead firms, which would benefit the MNEs themselves, as well as the economic environment surrounding them.

Manufacturing and offshoring trends in Italy and in the Veneto region

The manufacturing share of western European economies has been decreasing since 2000, falling by 3.3 percentage points of Gross Domestic Product (GDP) over the period 2000 to 2012. With an increase of 0.1 percentage points, Germany was the only western European country showing a manufacturing share of gross value added higher in 2012 compared to 2000. In the same period (2000–12), Finland reported the largest decrease in Western Europe (-10.2 percentage points), followed by Belgium (-5.9 percentage points), the United Kingdom (-5.6 percentage points), Sweden (-5.6 percentage points), France (-5.2 percentage points), Denmark (-4.7 percentage points), Spain (-4.6 percentage points) and Italy (-4.5 percentage points) ([Heymann and Vetter, 2013](15032-0551-FullBook.docx" \l "Ref_432_FILE150320551PII006" \o "(ManLink):Heymann, E., and Vetter, S. (2013). Europe’s Re-Industrialisation. The Gulf between Aspiration and Reality. Frankfurt: Deutsche Bank EU Monitor. UserName - DateTime: WFS-4/27/2017 4:25:37 PM)).[[1]](#endnote-1)

International fragmentation has affected many production activities. In particular, with respect to the case of Italy, outsourcing has been crucial in the economic systems of the northeastern region of Veneto, as well as the whole country, since 1999. As shown by [Corò et al. (2013](15032-0551-FullBook.docx" \l "Ref_405_FILE150320551PII006)), in the period 1999–2011 the offshoring index, defined as the share of imports of manufacturing goods over value added in manufacturing, exhibited an upward trend (except in 2009) both at the national level and in Veneto (Figure 6.1). [Corò et al. (2013](15032-0551-FullBook.docx" \l "Ref_405_FILE150320551PII006" \o "(ManLink):Corò, G., Schenkel, M. and Volpe, M. (2013). International offshoring, local effects: An inquiry on Italian firms. Symphonya. Emerging Issues in Management, 2, pp. 1–13. UserName - DateTime: WFS-4/27/2017 1:53:36 PM)) claim that the lower value of the index in Veneto compared to the value reported in Italy can be explained by the strong specialization of Veneto in manufacturing sectors. Manufacturing production in Veneto is mainly based on the industrial districts in the Made in Italy sectors. Indeed, this region hosts 28 industrial districts operating in these sectors, accounting for 62% of the districts in the North-Eastern macro-area, and for about 20% of districts in Italy. They are specialized in medium-high technology (mechanics: 43%), and low-technology sectors (home furniture: 25%; textile and clothing: 18%; leather and shoes: 7%; food and jewellery: 4% each) (ISTAT, 2015).

[Insert Figure 6.1 Here]

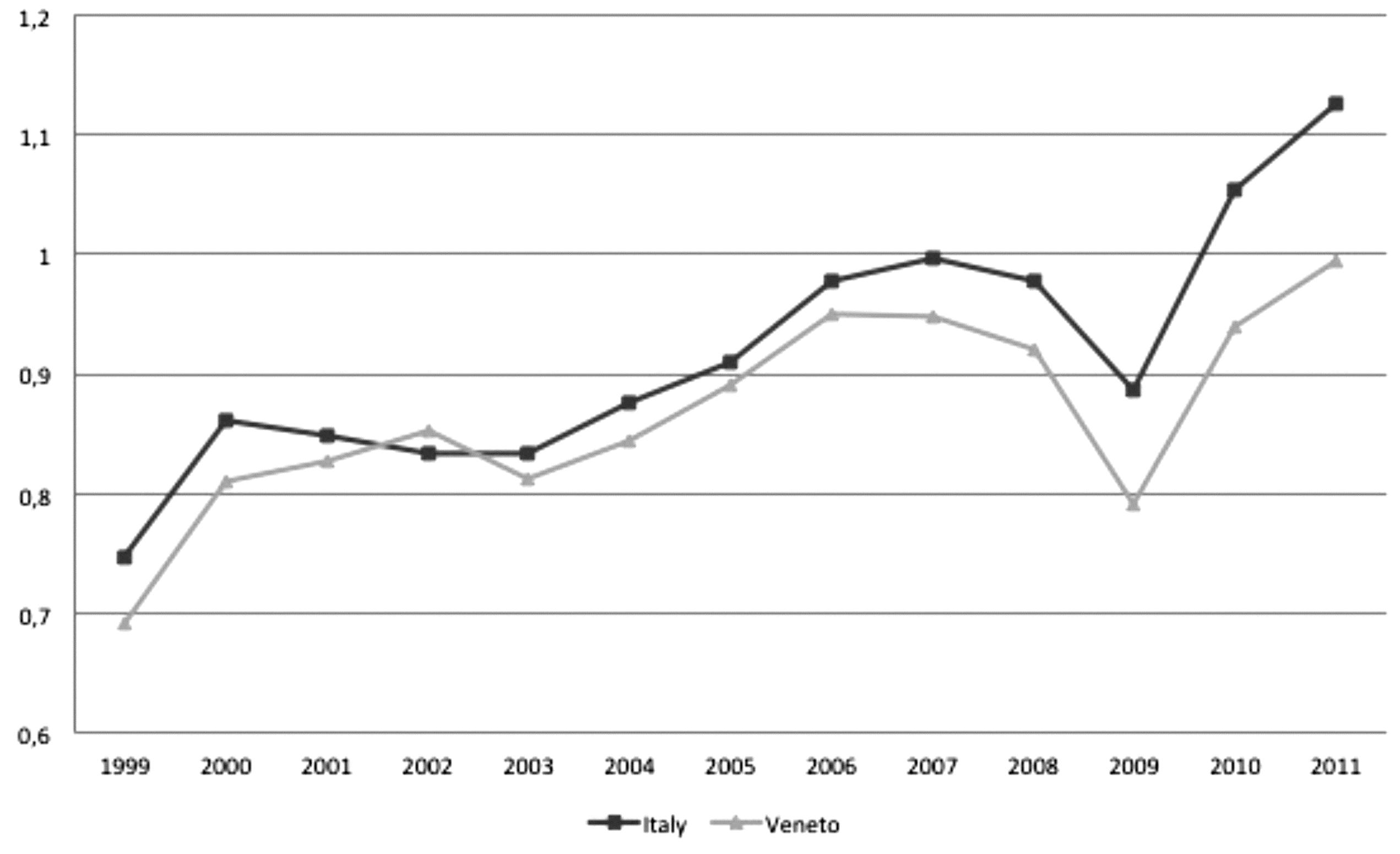


Figure 6.1 Offshoring index for Italy and the Veneto region 1999–2011.

Source: Computation by [Corò et al. (2013](15032-0551-FullBook.docx" \l "Ref_405_FILE150320551PII006" \o "(ManLink):Corò, G., Schenkel, M. and Volpe, M. (2013). International offshoring, local effects: An inquiry on Italian firms. Symphonya. Emerging Issues in Management, 2, pp. 1–13. UserName - DateTime: WFS-4/27/2017 1:54:32 PM)) based on Trade Statistics available from Istat, www.coeweb.it.

Notwithstanding the fact that the manufacturing industry is the sector that has mainly suffered from the impact of offshoring processes, the importance of this industry is still particularly relevant in advanced economies. For instance, in Europe the manufacturing sector accounts for over 15% of GDP (EU-27), but the overall impact on the economy is much greater, especially in terms of jobs. [Rueda-Cantuche et al. (2012](15032-0551-FullBook.docx" \l "Ref_449_FILE150320551PII006" \o "(AutoLink):Rueda-Cantuche, J. M., Sousa, N., Andreoni, V., and Arto, I. (2012). The single market as an engine for employment growth through the external trade. Joint Research Centre, IPTS, Seville. UserName - DateTime: WFS-4/26/2017 5:36:34 PM)) have estimated that for every new job in manufacturing up to two jobs in other sectors will be created in Europe. Indeed, a solid industrial base not only generates the need for highly skilled workers, but also fosters labour markets in other sectors by inducing demand for related business functions and services. Moreover, a strong manufacturing industry contributes to sustaining as well as stimulating new export channels, as manufacturing exports on average account for over 50% of total exports in Western Europe ([Kroker and Lichtblau, 2013](15032-0551-FullBook.docx" \l "Ref_429_FILE150320551PII006" \o "(ManLink):Kroker, R., and Lichtblau, K. (2013). ‘Industrieland Europa’: Die europäische Industrie im internationalen Vergleich. In: Cologne Institute for Economic Research (publisher, 2013). Die Zukunft der Industrie in Deutschland und Europa. IW-Analysen No. 88. Cologne. UserName - DateTime: WFS-4/27/2017 1:54:40 PM) as cited by [Heymann and Vetter, 2013](15032-0551-FullBook.docx" \l "Ref_432_FILE150320551PII006" \o "(ManLink):Heymann, E., and Vetter, S. (2013). Europe’s Re-Industrialisation. The Gulf between Aspiration and Reality. Frankfurt: Deutsche Bank EU Monitor. UserName - DateTime: WFS-4/27/2017 1:55:01 PM), p. 2).

A balanced economy may be a powerful tool to better face economic downturns, and for this reason European policy-makers are promoting a manufacturing renaissance by: 1) establishing “an industrial policy creating the best environment to maintain and develop a strong, competitive and diversified industrial base in Europe [ . . . ]” ([EU Commission, 2010](15032-0551-FullBook.docx" \l "Ref_414_FILE150320551PII006" \o "(ManLink):European Commission (2010). Europe 2020: A strategy for smart, sustainable and inclusive growth. Brussels. UserName - DateTime: WFS-4/27/2017 1:55:11 PM)); and, 2) reversing the declining role of industry in Europe by targeting an increasing share of the manufacturing sector of up to 20% of GDP by 2020 ([EU Commission, 2012](15032-0551-FullBook.docx" \l "Ref_415_FILE150320551PII006" \o "(ManLink):European Commission (2012). Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions. UserName - DateTime: WFS-4/27/2017 1:55:15 PM)).

In 2012, Italy was the second-largest industrial country in the EU, after Germany. In the same year, it generated 12.5% of the total industrial gross value-added (GVA) within the EU, preceded only by Germany, with 30.5% of the total EU GVA (Eurostat, as cited by [Heymann and Vetter, 2013](15032-0551-FullBook.docx" \l "Ref_432_FILE150320551PII006" \o "(ManLink):Heymann, E., and Vetter, S. (2013). Europe’s Re-Industrialisation. The Gulf between Aspiration and Reality. Frankfurt: Deutsche Bank EU Monitor. UserName - DateTime: WFS-4/27/2017 1:55:38 PM)).

Despite the decline in the manufacturing sector and the job losses, the northern Italian region of Lombardia (including the city of Milan) and the French capital city region of Île de France recorded the highest number of workers employed in manufacturing in 2012 at the NUTS-2 level within the EU-28. The regions with the next largest manufacturing workforces were Stuttgart (Germany) and the northeastern Italian region of Veneto, with just over half a million people employed in manufacturing ([Eurostat, 2016](15032-0551-FullBook.docx" \l "Ref_417_FILE150320551PII006" \o "(AutoLink):Eurostat. (2016). Manufacturing statistics – NACE Rev. 2 – Data extracted in November 2015. ISSN 2443–8219. Last modified on 24 February 2016. Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Manufacturing_statistics_-_NACE_Rev._2 UserName - DateTime: WFS-4/26/2017 5:36:12 PM)). In 2012, among the top 20 list of regions with the highest workforce share in the manufacturing sector, [Eurostat (2016](15032-0551-FullBook.docx" \l "Ref_417_FILE150320551PII006" \o "(AutoLink):Eurostat. (2016). Manufacturing statistics – NACE Rev. 2 – Data extracted in November 2015. ISSN 2443–8219. Last modified on 24 February 2016. Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Manufacturing_statistics_-_NACE_Rev._2 UserName - DateTime: WFS-4/26/2017 5:36:12 PM)) reports eight German regions, followed by five regions in Italy, three regions in Poland, two in France, and one each in Spain and Portugal.

Methodology

Building on [Yin’s (2003](15032-0551-FullBook.docx" \l "Ref_454_FILE150320551PII006" \o "(AutoLink):Yin, R.K. (2003). Case Study Research: Design and Methods. Newbury Park, CA: Sage Publications, 3/e. UserName - DateTime: WFS-4/26/2017 5:36:42 PM)) work, we adopt a multiple case study approach as it represents a suitable research method given the exploratory nature of the analysis ([Hartley, 1994](15032-0551-FullBook.docx" \l "Ref_431_FILE150320551PII006" \o "(AutoLink):Hartley J. (1994). Case Studies in Organizational Research. In: Cassell, C. and Symon, G. (Eds), Qualitative Methods in Organizational Research. London: Sage. 208–29. UserName - DateTime: WFS-4/26/2017 5:36:26 PM); [Silvi and Cuganesan, 2006](15032-0551-FullBook.docx" \l "Ref_450_FILE150320551PII006" \o "(ManLink):Silvi, R., and Cuganesan, S. (2006). Investigating the management of knowledge for competitive advantage: A strategic cost management perspective. Journal of Intellectual Capital, 7(3), 309–323. UserName - DateTime: WFS-4/27/2017 1:56:13 PM)). The in-depth investigation implied in this method allows the researcher to acquire a finer understanding of the specific phenomenon under analysis ([Eisenhardt, 1989](15032-0551-FullBook.docx" \l "Ref_410_FILE150320551PII006" \o "(AutoLink):Eisenhardt, K. M. (1989). Building theories from case study research. Academy of Management Review, 14(4), 532‐50. UserName - DateTime: WFS-4/26/2017 5:36:10 PM); [Yin, 2003](15032-0551-FullBook.docx" \l "Ref_454_FILE150320551PII006" \o "(AutoLink):Yin, R.K. (2003). Case Study Research: Design and Methods. Newbury Park, CA: Sage Publications, 3/e. UserName - DateTime: WFS-4/26/2017 5:36:43 PM)) and at the same time provides grounded evidence on whether the findings are idiosyncratic to a single case or generalizable, as they are consistently replicated in several cases ([Eisenhardt, 1989](15032-0551-FullBook.docx" \l "Ref_410_FILE150320551PII006" \o "(AutoLink):Eisenhardt, K. M. (1989). Building theories from case study research. Academy of Management Review, 14(4), 532‐50. UserName - DateTime: WFS-4/26/2017 5:36:10 PM)). Thus, drawing on previous qualitative studies underlining the need to examine cases showing differences ([Eisenhardt and Graebner, 2007](15032-0551-FullBook.docx" \l "Ref_411_FILE150320551PII006" \o "(ManLink):Eisenhardt, K.M., and Graebner, M.E. (2007). Theory building from cases: Opportunities and challenges. Academy of Management Journal, 50(1), 25‐32. UserName - DateTime: WFS-4/27/2017 1:56:26 PM)), we have selected 10 manufacturing MNEs located in Veneto which differ in sector, internationalization process and the GVC to which they belong.

The 10 companies have been chosen primarily on the basis of four criteria:

1 They operate in industries that have faced considerable pressure from the global opening up processes in the last decades;

2 They are based in Italy and, in particular, in the Veneto region. The rationale for this choice is four-fold. First, Italy is the second-largest industrial country in the EU and Veneto recorded the highest number of workers employed in 2012 in the manufacturing sector. Second, Italy has a long and renowned worldwide tradition in manufacturing, as above reported. Third, focusing on this manufacturing region allows us to explore the role played by MNEs in the emergence of new sectors stemming from the combination of know-how embedded in different IDs (inter-cluster innovation). Finally, keeping the industrial location constant ([Navas-Alemán, 2011](15032-0551-FullBook.docx" \l "Ref_440_FILE150320551PII006" \o "(AutoLink):Navas-Alemán, L. (2011). The impact of operating in multiple value chains for upgrading: the case of the Brazilian furniture and footwear industries. World Development, 39(8), 1386–1397. UserName - DateTime: WFS-4/26/2017 5:36:31 PM)) enables us to control for legal, cultural, and socio-economic frameworks;

3 The selected companies operate in sectors in which Italy, and in particular Veneto, traditionally has a competitive advantage; for example, 1) high-quality mechanical engineering, automation and pharmaceuticals in the field of technology intensive and medium-tech industries; and 2) textiles, apparel and furniture with regards to traditional manufacturing industries.

4 The sampled companies are multinationals, as they are, by definition, multi-located. Hence, these companies have tools available to evaluate where to carry out their activities and how to undertake strategies of integrated production. This allows us to investigate to what extent the assets of the industrial commons present in Veneto are key resources for the companies.

To explore whether the ownership of the company could make a difference in sustaining the development of the local assets, we have considered firms that are both domestically and foreign owned. All the 10 analyzed companies are home-grown, but three of them have been acquired by foreign companies. Two companies are controlled by investment funds, the other by an MNE operating in the same sector as the firm acquired. The high level competencies of the Italian company represent the main rationale of the foreign direct investments. The sampled firms differ in terms of type of governance and position in the GVC. Three of them are lead firms present in captive GVCs, whilst the remainders are specialized suppliers (six relational suppliers and one full-package supplier in a modular GVC). Notwithstanding their different roles, they all play the function of leading firms in the territory in which they are located. None of the companies analyzed is a dominant player for the entire ID to which it belongs, but all of them are key leaders in their district area. The ten companies have kept R&D, logistics, ICT and corporate activities in-house, whilst they have undertaken different strategies in terms of the location of operations. Some of them decided not to move production from the Veneto base; others moved completely or partially aboard. Table 6.1 indicates the main economic features of the case studies and their position in the GVC in which they are involved. To guarantee the anonymity of the 10 companies, we list them under pseudonyms.

Table 6.1 Case study main characteristics

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Company | Industry | Turnover size class  (2013) | Employment size class (2013) | Ownership | District | Type of governance and position in the GVC |
| Company One | Electric motors | 5 | 5 | Domestically owned | Mechatronics and innovative mechanical (M&iM) Technologies (meta-district) | Relational supplier |
| Company Two | Glass installation | 1\* | 4 | Domestically owned | Vicenza Gold district and furniture | Lead firm in a captive GVC |
| Company Three | Sportswear and protective protections | 2\* | 2\* | Foreign owned since 2014 | Vicenza Leather-tanning and Montebelluna Sportsystem | Lead firm in a captive GVC |
| Company Four | Pharmaceuticals | 1 | 2 | Foreign owned since 2000 | Area with high presence of pharmaceutical industry | Relational supplier |
| Company Five | Motors and Generators | 2 | 4 | Foreign owned since 2013 | M&iM  technologies | Relational supplier |
| Company Six | Glass packaging and forming technology | 4 | 5 | Domestically owned | M&iM  technologies | Full-package supplier |
| Company Seven | Apparatus and systems of power | 4 | 5 | Domestically owned | M&iM  technologies | Lead firm in a captive GVC |
| Company Eight | Machines and system | 4 | 5 | Domestically owned | M&iM  technologies | Relational supplier |
| Company Nine | Fashion | 3 | 2 | Domestically owned | Schio – Thiene – Valdagno Textile and Clothing | Relational supplier |
| Company Ten | Heating and electrical system | 3\* | 5 | Domestically owned | Conegliano Electronic Appliances | Relational supplier |

*Source:* AIDA database by Bureau van Dijk and company reports.

*Note*: *Turnover size class* depending on annual turnover, in millions of Euros: *1* (less than 50); *2* (50–100); *3* (100–250); *4* (250 or more). Employment size depending on number of employees*: 1* (1–99); *2* (100–249), *3* (250–499), *4* (500–999); *5* (1000 or more).

\* Unconsolidated

The in-depth study of the 10 cases is the result of the collection of primary and secondary data, through semi-structured interviews and archival research. Specifically, the archival research aimed to collect quantitative data through analysis of published corporate reports, financial reports, and companies’ websites. The information gathered was subsequently supplemented by qualitative data obtained through in-depth interviews, mainly with human resource (HR) managers or Chief Executive Officers (CEOs). During the interviews we obtained information on the organization’s international production activities, as well as the business functions that the company performs and where they take place. The specific links the company has established with the home-base socio-economic environment in which it is embedded were also investigated.

Results and discussion

Industrial commons strategic assets

The evidence collected clearly shows that the presence of critical skills, suppliers, and educational/training programs play an important role for companies and, in general, for their home-based production system.

Labour pool

The know-how circulating in the ID area allows enterprises to source workers from a pool of people whose skills are tailored to enterprises’ demands. The match between skills demand and supply, particularly those necessary for operations management, has allowed companies to develop high-quality products, customizing the offering according to demand needs and maintaining control over the innovation processes. As claimed by Company Ten’s General Manager:

“*The territory in which the company was funded [“Inox Valley” ID*[[2]](#endnote-2)*] and has grown is endowed with such a strong and qualified human capital that it has allowed the company to reach its goal over time.* He continues that, “*there is no application area in which we operate that cannot be supplied with the local human resources.*”

The human capital present in the local labour market prevents MNEs from making the decision to move production to more economically convenient areas. The technical skills of the people educated in the match the competencies needed by the firms well, especially in operations.

“*We find these competencies ready in the market. Fortunately, here [in this area] the pool is broader than in other Italian regions and/or in other countries*”. He continues, “*here the walls exude electrical engineering.*”

(Company Five’s Chief HR and Organization Officer)

“*In the territory, you can easily find the technical skills needed for operations.*”

(Company Eight’s HR Manager)

Education system

From this perspective, an important role is played by the technical and vocational educational system, in which companies recognize the ability to have created a pool of technical skills and attitudes necessary to constantly develop new viable products.

“*We benefit from a local higher education (as well as vocational) presence which is extremely qualified. For instance, the local university shapes a pool of knowledgeable graduates. There is no obstacle in employing a mechanical engineer; the university prepares professional profiles that absolutely meet our needs.*”

(Company Seven’s HR Manager)

“*If we talk about technical competencies, we are very strong as we have a great tradition in our* *universities and other educational institutions.”*

(Company Five’s Chief HR and Organization Officer).

“*Chemists, chemical engineers and pharmacists come mainly from the [City] University. Here* *there is a long tradition of organic chemistry. If I want to find a chemist with a doctorate* *degree and a specific curriculum I can easily find one.*”

(Company Four’s General Manager)

Supplier networks

Over the years, supply networks have become increasingly global. In particular, the proximity of original equipment manufacturer (OEM) suppliers is now defined in terms of macro-areas. The Italian bases of the investigated companies mainly use OEM suppliers located in Europe. The cases in which companies use local suppliers refer to a few special needs, such as commodities (for example, standard solvents used in the chemical industry in Company Four’s case) or goods, which involve an intensive interchange between producer and consumer.

“*The district is fundamental for our supply, for two main reasons: first, the typology of the product they make; second, which is the most important, they have a distinctive competence in the treatment of the raw material that nobody else in the world has. We have to buy this product here because of their knowledge.*”

(Company Three’s CEO)

The type of OEM suppliers the interviewed companies deal with have been changing over time. The local suppliers have evolved into global suppliers; that is, they have spread their presence through production facilities at the international level:

“*In the past we had local suppliers. Now we have begun to have global suppliers, but with a base in Italy. [* . . . *] Because our activities require special designs and pieces, local control is quite important. There is the risk that a supplier mistakenly produces a piece and we cannot have a supplier that is a thousand kilometres away. [*. . .*] The relationship with the supplier is built on a constant interchange, that needs not only a common technical language, but also trust.*”

(Company Eight’s HR Manager)

“*An important share of our key suppliers is located close to our headquarters. We have established a medium/long-term relationship with them, based on a win-win client-supplier exchange.*”

(Company Six’s Supply Chain Manager)

The presence of local suppliers, whether they are global suppliers or not, is a necessary condition for the local production system to be dynamic and innovative, as it simultaneously slows down the fading of the local supply chain which enables the development of the home-based industrial commons.

Institutions and financial system

The institutional environment as well as the financial system represents local assets which are important for the sampled companies; both of them enable and empower companies to carry out their activities. However, their relevance emerges as secondary with respect to the local workforce skills, education system and supplier network.

“*We have relationships with local institutions, more specifically with the industrial association of our province. We have activated collaboration with both public and private organizations, which have supported our internationalization process over several stages, such as scouting, analysis and settlement in foreign markets*”. Company Six’s Accounting Manager continues by saying “*our group cultivates relationships both with local, national and global* *financial institutions. We avail ourselves of the support of the local financial system, in* *particular of that provided by the local banking system. Amongst our partners we count* *financial institutions, characterized by strong local vocations, that have gone along and still go along with our group, fostering our business growth.*”

With regard to the financial system, the access to credit does not emerge as a critical local asset. The majority of the sampled companies source complex financial services from suppliers located in national or international financial centres.

The institutional environment could potentially be considered a key asset by the companies, just as local workforce skills, the education system and supplier network are. Yet, according to the sampled firms, there is scope for improvement in building fruitful relationships with local public administration. Company Ten’s and Company One’s Managers suggested some concrete examples:

“*It would be useful if the local institutional body could help boost companies based in its territory, through actions supporting firms’ presence abroad. For instance, in the exhibition [omitted], a country like [omitted] promotes goods produced in its country and assists its companies on a systematic basis, through marketing actions and technical support (i.e. supplying firms with timely technical reports on-demand during the exhibitions).*”

(Company Ten’s General Manager)

“*Public administration should improve the territorial attractiveness by developing infrastructures and contributing to creating more lively cities; this would help companies to be more appealing for workers.*”

(Company One’s HR Manager)

The role of MNEs in supporting ID assets

Local assets and MNE actions are strictly connected. On the one hand, local assets influence MNEs’ performance (according to the mechanisms mentioned in the section “Industrial commons strategic assets”); on the other, the activities undertaken by MNEs contribute to the generation of a set of local assets. The actions that the companies investigated have taken in favour of the industrial commons present in their home-based are different, although very often it is an indirect effect (outcome), not intentionally directed to that scope.

Empirical evidence highlights the pivotal role that MNEs may play in sustaining and fostering knowledge specialization and resource agglomeration. More specifically, all the companies interviewed have acted as “anchor tenant” ([Feldman, 2003](15032-0551-FullBook.docx" \l "Ref_420_FILE150320551PII006" \o "(AutoLink):Feldman, M. (2003). The locational dynamics of the US biotech industry: knowledge externalities and the anchor hypothesis. Industry and Innovation, 10(3), 311–329. UserName - DateTime: WFS-4/26/2017 5:36:14 PM)), triggering positive externalities by attracting a critical mass of suppliers as well as a skilled labour force. According to the anchor tenant hypothesis proposed by [Feldman (2003](15032-0551-FullBook.docx" \l "Ref_420_FILE150320551PII006" \o "(AutoLink):Feldman, M. (2003). The locational dynamics of the US biotech industry: knowledge externalities and the anchor hypothesis. Industry and Innovation, 10(3), 311–329. UserName - DateTime: WFS-4/26/2017 5:36:14 PM), p. 323),

a large firm may be a better anchor, in terms of economic success, for a developing industry than an equivalent number of small firms. Even if the stock of skilled employees were equal under each regime, the large firm may exert a stronger influence.

Indeed, large established firms are more likely to generate an agglomeration of skilled labour, demand for specialized inputs, and the presence of potential entrepreneurs who may generate spin-offs from the established anchor and set up new firms ([Klepper, 2001](15032-0551-FullBook.docx" \l "Ref_427_FILE150320551PII006" \o "(AutoLink):Klepper, S. (2001). The evolution of the U.S. automobile industry and Detroit as its capital. Carnegie Mellon University Working Paper, November. UserName - DateTime: WFS-4/26/2017 5:36:25 PM)).

The evidence shows that when MNEs perceive the district areas in which have grown as a strategic base performing high added value business functions, they further stimulate the agglomeration of investments, expertise and specialized companies. As shown in the interviews, Italian plants are places dedicated to the development of strategic products.

“*We have made significant investments in Italy to develop [new equipment]. Last year we increased investment to strengthen the group’s innovative capacity by enlarging the testing room for new high-technological products.*”

(Company Five’s Chief HR and Organization Officer)

The analysis reports that local assets benefit from the presence of the “anchor tenant”, the MNE leader – at the international level – in the sector in which they operate. Indeed, the “catalyst” ([Feldman and Lowe, 2008](15032-0551-FullBook.docx" \l "Ref_421_FILE150320551PII006" \o "(ManLink):Feldman, M., and Lowe, N. (2008). Consensus from controversy: Cambridge’s biosafety ordinance and the anchoring of the biotech industry. European Planning Studies, 16(3), 395–410. UserName - DateTime: WFS-4/27/2017 1:57:40 PM)) function performed by the anchor tenant also clearly arose during the interviews with Company Ten’s General Manager and Company Eight’s HR Manager.

“*We manufacture our product in Italy and, moreover, we approved a further expansion in this territory. [* . . . *] We will employ more than 150 workers (both low- and high-skilled profiles) to supply one of the biggest automobile players. [* . . . *] We absorb workers from those companies located in this territory that experienced a downshift.*”

(Company Ten’s General Manager)

Company Eight’s HR manager states that the company attracts high-qualified workers thanks to the role of technological leader that they play in the sector.

In a few cases, the MNEs we interviewed act as an anchor tenant intentionally, with the final aim of being loyal to the territory and of supporting the accumulation of knowledge as well as expertise. Building on the historical specialization of the socio-economic environment around which the company is set, Company Seven supports the accumulation of knowledge and the agglomeration of expertise by training future workers. Indeed, the company continuously employs intern students enrolled at local technical schools. According to the company’s HR Manager, Company Seven decided to undertake this action as a tribute to the territory that has allowed (and still allows) it to become (and be) an international player.

MNEs do not only act as anchor tenant, but may undertake an “anchoring role” to “dovetail the local circuits of embedded and cumulative competences and specializations with the global circuit knowledge creation and transfer” ([De Propris and Crevoisier, 2011](15032-0551-FullBook.docx" \l "Ref_409_FILE150320551PII006" \o "(ManLink):De Propris, L. and Crevoisier, O. (2011). From Regional Anchors to Anchoring. In: Cooke, P., Asheim, B. T., Boschma, R., Martin, R., Schwartz, D., and Tödtling, F. (Eds.) Handbook of Regional Innovation and Growth. City? Edward Elgar Publishing. UserName - DateTime: WFS-4/27/2017 1:57:49 PM), p. 171). According to the definition of [De Propris and Crevoisier (2011](15032-0551-FullBook.docx" \l "Ref_409_FILE150320551PII006" \o "(ManLink):De Propris, L. and Crevoisier, O. (2011). From Regional Anchors to Anchoring. In: Cooke, P., Asheim, B. T., Boschma, R., Martin, R., Schwartz, D., and Tödtling, F. (Eds.) Handbook of Regional Innovation and Growth. City? Edward Elgar Publishing. UserName - DateTime: WFS-4/27/2017 1:58:08 PM)), anchoring can have a different meaning to that of Feldman, which is related to the anchoring to the locally embedded nature of tacit knowledge and learning in firms’ and regions’ innovation processes. De Propris and Crevosier propose an alternative concept of anchoring; that is, deep and complex roots that businesses have in a local context whilst simultaneously engaging in open, multi-local networks. Anchoring refers to the fact there are forms of linkages and relations that can occur between a context of localized knowledge, like the one present in district areas, and those that are outside them.

MNEs at the same time engage in both local assets and global networks, enabling the pollination of the local socio-environment with new inputs, ideas and innovations ([Giblin, 2011](15032-0551-FullBook.docx" \l "Ref_426_FILE150320551PII006" \o "(AutoLink):Giblin, M. (2011). Managing the global – local dimensions of clusters and the role of ‘lead’ organizations: the contrasting cases of the software and medical technology clusters in the west of Ireland. European Planning Studies, 19(1), 23–42. UserName - DateTime: WFS-4/26/2017 5:36:25 PM)). The following quotation reveals three ways (passive internationalization, foreign collaboration and active internationalization, respectively) according to which district territories can benefit from having MNEs undertaking an anchoring role, which allows them to be able to float in the global network while being rooted in the district:

“*Thanks to the investment fund that acquired us, we have been able to absorb expertise of international sales as well as use their knowledge and network to penetrate new markets. [* . . . *] The financial resources and know-how of international markets provided by the fund have enabled us to boost our locally grounded technical competencies and become one of the major international players in our sector.*”

(Company Five’s Chief HR and Organization Officer)

To complement and foster local resources with global ones, Company Eight and Company Six employ foreign technicians in R&D activities within their Italian branches in order to facilitate the activation of collaborations with research institutions abroad, integrating and thus increasing the knowledge stock in the area. New inputs and innovations also arise from the collaboration on a continuous basis with international universities and research centres (e.g. Company Three), and with international artists (leading architects and designers) in the case of the fashion/design sector (Company Two).

“*We signed partnerships with several international research centres and universities. We collaborated with and for [omitted] university [in the USA]. They paid us to develop [clothes for specific activities]. A small group of students came here to work with our experienced modelers.*”

(Company Three’s CEO)

Following a technology-seeking strategy, MNEs may acquire companies in related sectors to upgrade their products and boost parent company innovation capabilities, as occurred in Company Seven and Company Ten.

“*Our acquisitions have been the outcome of a strategic choice, aiming to become an international player. [* . . . *] In Europe and other advanced markets, the goal of acquisitions was to internalize specific technologies. The acquisition path has been coherent with our core business, to complement our know-how and develop new strategic products.*”

(Company Seven’s CEO)

MNEs are one of the territorial actors that can play the role of anchor tenant in a regional system of innovation; universities and public laboratories might assume this role as well ([Feldman, 2003](15032-0551-FullBook.docx" \l "Ref_420_FILE150320551PII006" \o "(AutoLink):Feldman, M. (2003). The locational dynamics of the US biotech industry: knowledge externalities and the anchor hypothesis. Industry and Innovation, 10(3), 311–329. UserName - DateTime: WFS-4/26/2017 5:36:15 PM)). The exploitation of synergies and interdependencies amongst the business community, government and universities (the triple helix; see [Etzkowitz and Leydesdorff, 2000](15032-0551-FullBook.docx" \l "Ref_418_FILE150320551PII006" \o "(ManLink):Etzkowitz, H., and Leydesdorff, L. (2000). The dynamics of innovation: From national systems and ‘mode 2’ to a triple helix of university – industry – government relations. Research Policy, 29(2), 109–123. UserName - DateTime: WFS-4/27/2017 1:58:20 PM)) would enhance the sustainability of the regional innovation systems ([De Propris and Crevoisier, 2011](15032-0551-FullBook.docx" \l "Ref_409_FILE150320551PII006" \o "(ManLink):De Propris, L. and Crevoisier, O. (2011). From Regional Anchors to Anchoring. In: Cooke, P., Asheim, B. T., Boschma, R., Martin, R., Schwartz, D., and Tödtling, F. (Eds.) Handbook of Regional Innovation and Growth. City? Edward Elgar Publishing. UserName - DateTime: WFS-4/27/2017 1:58:29 PM)). Thus, the impact of a MNE acting as “anchor tenant” on the reproduction of the local resources system can be fostered by initiating partnerships between companies and technical institutes/universities in the region. The companies investigated have implemented several local channels to constantly increase workers’ skill endowment, in an attempt to integrate the technical knowledge that employees already own thanks to the local education system, with managerial skills and behavioural ones. The partnerships with universities are mostly made with institutions located close to the companies, in the same region and/or neighbouring regions. The partnerships established with technical schools highlight a more pronounced local nature; they tend to be created within the same region, and often the same province or district. The collaborations between the companies investigated and the educational system are heterogeneous. They differ in terms of intensity and duration, as well as in the types of programs. In Company Four, Company Five and Company Eight the collaborations with universities are structured and continuous. Collaborations with universities established to meet specific company needs are more common. A possible result of the synergy between higher education institutes and companies is evidenced by the experience revealed by Company Five’s Chief HR and Organization Officer of actions undertaken by the firm to develop its corporate workforces. Company Five has established a continuous collaboration with at least one Italian university. In their plants and offices, courses are continuously organized for high-skilled workers in order to enrich and complement their soft skills to enable the company to be more efficient and integrated at the international level.

Finally, actions taken by the companies show how MNEs can sustain the regeneration of the industrial commons by recombining specificities of geographically close IDs, enabling them to create new products and/or new sectors. Indeed, MNEs can play a key role in the emergence of new sectors, stemming from the combination of know-how embedded in different IDs (inter-cluster innovation). Two interviewed MNEs (namely, Company Two and Company Three) have developed new products and created new market niches by using the web of relationships located in the two different IDs. Company Two was able to couple expertise embedded in the gold jewellery district with the furniture district, becoming international leader in providing customized solutions for interior and outdoor design projects. At the same time, by blending knowledge flowing in the Montebelluna sportsystem district with that circulating in the leather-tanning Arzignano district, the Company Three has triggered the development of new products within the fields of sportswear and protective clothing. Such joint use of expertise belonging to different IDs has nourished a critical mass of talented labour, educational/research centres and specialized firms, ensuring the regeneration of the ID capabilities and the flourishing of a specific industry.

Conclusions

The aim of this research was to shed light on the relationship between MNEs’ internationalization processes and the use of industrial commons embedded in district areas. The analysis helps to explore what the critical factors in upgrading the manufacturing base in advanced countries are, as well as in maintaining the attractiveness and competitiveness of these countries in the new global division of labour. To investigate this phenomenon, we devote particular attention to the expertise and networks of inter-organizational relationships developed in the district areas located in the Veneto region (Italy), as an expression of the local engines that have enabled Italian economic growth and contributed to its presence in international markets.

Comparing previous studies on international business, ID and GVC, it emerges a need to balance local and global involvement. Being at the edges of the local and global continuum might generate detrimental effects. Delocalizing many business functions might lead to losing core knowledge; conversely, sharing many proximity dimensions can be disadvantageous, because being too involved in a territory can inhibit cross-pollination through “lock-in”. The information collected confirms that local relationships are not an alternative to global ones. Conversely, the ability of a manufacturing company to develop strong links with the local labour market and supplier networks is a condition to increase its international projection. The intense use of local resources integrated with external factors eases the maintenance of the home-based industrial commons, which in turn contributes to improving both companies’ competitiveness and local resource quality. The influence of local assets in supporting the strategies of internationalization has been clearly shown in all the investigated companies, in particular in the matching of supply/demand in the labour market, local supplier networks and the education system. The programs provided by the education system have been evaluated as corresponding to company needs. Knowledge and skills, both technical and manufacturing in nature, seem to be the factor that has greater territorial impact on the companies’ results and, more specifically, on the conditions that make it possible to maintain some degree of GVC governance. Evidence from the present work highlights how local supplier networks continue to be relevant factors in the territory, especially when there is a need for a company to exchange strategic information continuously and with high frequency.

The results show some examples of how territorial competitiveness can rely on local capacity to be part of long-distance interactions, through foreign investments carried out by MNEs, their actions as anchor tenants and their anchoring role. Companies can contribute to the development of the home-based industrial commons even through their foreign investment decisions. Indeed, to a certain extent foreign investment decisions by local companies could be beneficial for the development of local assets. They are desirable if MNEs undertake them not to weigh anchor but to leverage the domestic-base resources. The presence of MNEs acting, either intentionally or not, as anchor tenant in the territory and representing international excellence is an extraordinary factor in attracting talent and resources from outside the local system. Moreover, thanks to the “anchoring role” performed by these companies, the local dimension can take advantage of the diversity and complementarity of these external inputs, integrating them with the existing “local circuits of embedded and cumulative competences” ([De Propris and Crevoisier, 2011](15032-0551-FullBook.docx" \l "Ref_409_FILE150320551PII006" \o "(ManLink):De Propris, L. and Crevoisier, O. (2011). From Regional Anchors to Anchoring. In: Cooke, P., Asheim, B. T., Boschma, R., Martin, R., Schwartz, D., and Tödtling, F. (Eds.) Handbook of Regional Innovation and Growth. City? Edward Elgar Publishing. UserName - DateTime: WFS-4/27/2017 1:58:38 PM), p. 175).

As our evidence has shown, MNEs can also sustain the regeneration of the ID production fabric by re-combining the specificities of geographically close IDs, which lead, in turn, to the creation of new products and/or the development of new sectors. The capability of MNEs to exploit and re-combine industrial commons present in two different districts has first enabled them to penetrate international markets; second to nourish a critical mass of talented labour, educational and research centres, and specialized firms; and third, to ensure the regeneration of ID capabilities as well as the flourishing of a specific industry.

The findings also provide suggestions on the conceptualization of sustainable growth models, which enable territories to attract and retain specialized workers and “deeply-rooted firms” ([Magnani, 2016](15032-0551-FullBook.docx" \l "Ref_436_FILE150320551PII006" \o "(AutoLink):Magnani, M. (2016). Terra e buoi dei paesi tuoi: Scuola, ricerca, ambiente, cultura, capitale umano: quando l’impresa investe nel territorio. Utet Libri. UserName - DateTime: WFS-4/26/2017 5:36:29 PM)). Better knowledge of local resources affecting the competitive advantage of firms willing to engage with global networks is a condition for defining the most appropriate interventions for local development policy and, more generally, for industrial policy intervention. To enhance MNEs’ anchoring role, it is necessary to increase companies’ awareness of the critical function played by the industrial commons in sustaining their growth and innovation capability. Only some of the investigated companies are aware of the critical role played by the local resources system. Paradoxically, foreign companies or foreign funds acquiring Italian firms have a better perception of this economic value. The value can be expressed by a certain degree of local stickiness in terms of manufacturing activity, which is the maintenance of, or the increase in, specialized manufacturing activities in the Italian base, as an implicit acknowledgement of the importance of the local industrial commons. To conclude, the chapter focuses on possible actions that the main private economic players, such as MNEs, can undertake to foster successful governance of the industrial commons. To increase this awareness, the territory should be considered as one of the company’s stakeholders. Concepts such as “territorial loyalty” should be promoted by a supportive political system or, as suggested in Ostrom’s work, by the resource users (not only companies, but also institutions and local communities). That means complex relationships between different actors; not only MNEs, but also institutions and local communities, all involved in maintaining a shared value. Further analysis needs to be made to establish precise policy interventions; there is need for further evidence on institutional behaviour, identifying institutional designs of sustainable use of the local industrial commons, investigating institutional regularities in effectively managing the local and global value chains involvement, and finally suggesting possible governance models. The findings of this research suggest that another promising research line is to study models of “synergistic governance” as sustainable ways of upgrading, both economically and socially ([Gereffi and Lee, 2016](15032-0551-FullBook.docx" \l "Ref_424_FILE150320551PII006" \o "(ManLink):Gereffi, G., and Lee, J. (2016). Economic and social upgrading in global value chains and industrial clusters: Why governance matters. Journal of Business Ethics, 133(1), 25–38. UserName - DateTime: WFS-4/27/2017 1:58:44 PM)).

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1. Further details can be found at [Eurostat (2016](15032-0551-FullBook.docx" \l "Ref_417_FILE150320551PII006" \o "(AutoLink):Eurostat. (2016). Manufacturing statistics – NACE Rev. 2 – Data extracted in November 2015. ISSN 2443–8219. Last modified on 24 February 2016. Available at: http://ec.europa.eu/eurostat/statistics-explained/index.php/Manufacturing_statistics_-_NACE_Rev._2 UserName - DateTime: WFS-4/26/2017 5:36:12 PM)). Industrial production (volume) index overview. European Commission. [↑](#endnote-ref-1)
2. The “Inox Valley” [Stainless Steel Valley] is an ID of household appliances, small household appliances, large plants or food service equipment, non-food service equipment and sanitary plants. [↑](#endnote-ref-2)